

CLAIMS

1. An optical disk restoration apparatus, which is characterized in that it comprises:

- 5 a) a rotatable object holder for holding an object to be polished;
b) a rotatable polishing body-holding unit for holding a polishing body;
c) a pressing means for pressing the object holder and the polishing body-holding unit onto each other with a predetermined pressure required for a polishing process; and
d) a driver for rotating at least the polishing body-holding unit,
10 where a holding surface of the object holder is provided with at least one of an inclined, step-like or curved profile.

2. The optical disk restoration apparatus according to claim 1, which is characterized in that the object holder comprises:

- 15 a) a holding table for holding the object to be polished; and
b) a sheet for preventing the object from slipping on the holding table.

3. The optical disk restoration apparatus according to claim 2, which is characterized in that the holding surface is provided with at least one of an inclined, step-like
20 or curved profile, by changing the thickness of the holding table and/or the sheet.

4. The optical disk restoration apparatus according to claim 2, which is characterized in that the holding surface is provided with at least one of an inclined, step-like or curved profile, by providing a spacer between the holding table and the sheet.

5. The optical disk restoration apparatus according to claim 2, which is characterized in that the holding surface is provided with at least one of an inclined, step-like or curved profile, by changing at least either a hardness, density or cross-sectional area of projections formed on the sheet.

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6. The optical disk restoration apparatus according to claim 2, which is characterized in that the holding surface is provided with at least one of an inclined, step-like or curved profile, by changing the hardness of the sheet.

10 7. An optical disk restoration apparatus, which is characterized in that it comprises:

a) a rotatable object holder for holding an object to be polished;

b) a first polishing body-holding unit for holding multiple polishing bodies;

c) a second polishing body-holding unit for holding one of the polishing bodies while

15 allowing its rotation;

d) a pressing/separating means for pressing or separating the object to be polished and the polishing body held by the second polishing body-holding unit onto or from each other; and

e) a driver for rotating at least the second polishing body-holding unit.

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8. The optical disk restoration apparatus according to claim 7, which is characterized in that the first polishing body-holding unit is a turret.

9. The optical disk restoration apparatus according to claim 7 or 8, which is
25 characterized in that it further comprises a rotating controller for regulating the rotation of

the object to be polished.

10. The optical disk restoration apparatus according to claim 9, which is characterized in that a linking part connecting the rotating controller and the object holder is
5 inserted through a cavity of a shaft of the first polishing body-holding unit.

11. The optical disk restoration apparatus according to claim 10, which is characterized in that the shaft of the first polishing body-holding unit has a cavity whose diameter is adequately large.

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12. The optical disk restoration apparatus according to claim 9, which is characterized in that the rotating controller is located at the lower end of a shaft of the object holder.

15 13. The optical disk restoration apparatus according to one of claims 7-12, which is characterized in that the object holder and the first polishing body-holding unit are arranged so that they are substantially concentric with and parallel to each other.

14. The optical disk restoration apparatus according to claim 11 or 12, which is
20 characterized in that the object holder and the first polishing body-holding unit are arranged so that they are substantially parallel to each other but are not substantially concentric with each other.

15. The optical disk restoration apparatus according to claim 10 or 11, which is
25 characterized in that the object holder and the first polishing body-holding unit can be

disengaged from each other by a vertical motion or a rotation of the object holder and/or the first polishing body-holding unit.

16. The optical disk restoration apparatus according to one of claims 7-15, which
5 is characterized in that the first polishing body-holding unit holds the second polishing body-holding unit by holding claws.

17. The optical disk restoration apparatus according to one of claims 7-15, which
is characterized in that the first polishing body-holding unit holds the second polishing
10 body-holding unit by a magnetic force.

18. The optical disk restoration apparatus according to one of claims 7-15, which
is characterized in that the first polishing body-holding unit holds the second polishing
body-holding unit by a thread engagement.

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19. The optical disk restoration apparatus according to one of claims 7-15, which
is characterized in that the first polishing body-holding unit holds the second polishing
body-holding unit by an elastic force of a spring.